

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Charleston WV Chemical Leak - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

POLREP #2

SContinuation of the Emergency Response/Removal Assessment Activities

uCharleston WV Chemical Leak

b

jCharleston, WV

eLatitude: 38.3685800 Longitude: -81.6066300

c

t

:

To: Melissa Linden, USEPA Region 3
Dennis Matlock, USEPA Region 3
Dominic Ventura, EPA

From: Dennis Matlock and Dominic Ventura, On-Scene Coordinators

Date: 1/20/2014

Reporting Period: 1/13/2014 through 1/20/2014

1. Introduction

1.1 Background

Site	Contr
Numb	act
er:	Numb
	er:
D.O.	Actio
Numb	n
er:	Memo
	Date:

Response Authority:	CERCLA		Response Type:	Emergency
Response Lead:			Incident Category:	Removal Assessment
NPL Status:			Operable Unit:	
Mobilization Date:	1/9/2014		Start Date:	1/9/2014
Demo Date:			Completion Date:	
CERCLIS ID:			RCRIS ID:	
ERNS No.:			State Notification:	
FPN#:			Reimbursable Account #:	
1.1.1 Incident Category				
Tank failure and subsequent chemical release into the Elk River, Etowah, WV.				
1.1.2 Site Description				
The Site consists of one breached tank, which is component to the facility, along with the soils beneath the tank, the pathway towards the Elk River, and the affected portion of the Elk River.				

1.1.2.1 Location				
<p>The incident occurred at the Freedom Industries, located at 1015 Barlow Drive, Charleston, Kanawha County, WV 25311.</p>				
1.1.2.2 Description of Threat				
<p>An imminent substantial endangerment to welfare and/or the public caused by a chemical release</p>				
1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results				
<p>WVDEP conducted the initial assessment of the scene, in response to an odor complaint to their Air Division. EPA mobilized to the Site and assumed a support role to WVDEP. EPA received reports through WVDEP that the chemical was identified as "Eastman Crude MCHM", which is a mixture of components, predominantly 4-methylcyclohexanemethanol. There is a licorice odor to the compound, which is caused by 4-(methoxymethyl) cyclohexanemethanol. The material was classified as non-toxic. However, analytical testing for this particular compound is still being developed; there is no drinking water method available. Dupont was assisting the West Virginia American Water Company (WVAWC) with the testing procedure.</p>				
<p>The spill occurred from one of three tanks that contain the MCHM. The secondary containment around the tanks was inadequate and failed. It was estimated that 5,000 gallons of the material were released. However, the volume of the compound that actually entered the river is uncertain.</p>				

<p>The RP utilized facility personnel and initiated the hiring of contractors to place boom along the left descending bank of the Elk River, adjacent to the area of the spill. The RP also hired contractors to conduct land clean-up operations.</p>				
<p>2. Current Activities</p>				
<p>2.1 Operations Section</p>				
<p>2.1.1 Narrative</p>				
<p>At 1545 hours, the NRC received an initial report that there was a strong chemical smell in the air from an unknown source in the Charleston, WV, area. Following, the National Response Center issued a notification report concerning a "Do Not Use Water Notice" that was issued by West Virginia American Water Company (WVAWC). The notice was issued for all West Virginia American Water customers in Kanawha, Boone, Putnam, Lincoln, Logan, Clay, Roane, and Jackson Counties, as well as customers in Culloden in Cabell County. Customers were told that as a precaution, customers should not use their water for any purpose. Certain areas were not affected, as they receive water from a different water source/intake, including the City of Hurricane, St. Albans, Putnam Public Service District (PSD), Montgomery and Cedar Grove/East Bank. Following the issuance of the "Do Not Use Water Notice", Governor Tomblin issued a State of Emergency for the affected counties. Consequently, the National Guard and Office of Emergency Services worked in a cooperative effort to provide water and supplies through the county emergency services as quickly as possible. Initially, an estimated 100,000 customers were without water. Priority was given to hospitals, nursing homes, and schools to</p>				

receive water first.				
<p>The cause of the odor was determined to be a release of a chemical, reportedly 4-Methylcyclohexane Methanol, which is used in the froth flotation process of coal washing and preparation. The chemical was released from a storage tank located at Freedom Industries, near Charleston, WV. The amount of chemical that was released was initially estimated at 5,000 gallons. An intake for WVAWC is located 1.5 miles downstream from the facility. The chemical was detected both by odor and by GC analysis at the Dupont Chemical Plant, located 10 miles downstream from the facility. The chemical was determined to be combustible, not flammable, as it has a flash point of 80 degrees Celcius. The chemical is lighter than water, having a density of 0.884 g/cm³.</p> <p>EPA contacted WVDEP and offered assistance. Upon arrival at the scene on January 10, 2014, EPA met with WVDEP and received an update of what was initially assessed. The source of the release was identified as a tank containing MCHM, which has a capacity of 40,000+ gallons. The tank failed at the valve and approximately 5,000 gallons of MCHM were released into the secondary containment, which failed. The MCHM seeped beneath the containment and into the materials between the tanks and the river. An unknown amount of the MCHM was released into the Elk River. Three tanks containing the MCHM were located in the spill area. The other two tanks, located on either side of the failed tank, were apparently stable.</p> <p>MCHM is manufactured by Eastman Crude. The mixture is mainly comprised of 4-methylcyclohexanemethanol (68-</p>				

89%). The mixture has a licorice odor, which is caused by 4-(methoxymethyl)cyclohexanemethanol.

WVDEP had issued a cease and desist order, a notice of violation from their air division, and a notice of violation of the facility's NPDES permit. WVDEP also directed the facility to contract a certified OSRO, as the initial responders were not certified.

The facility alerted EPA of a threat that was called in to the facility. The appropriate law enforcement arrived on scene to secure the location.

WVDEP directed the facility to dig a cut-off ditch because the chemical had permeated through the ground and was emerging from a storm drain outfall, continuing to enter the river. The facility's contractors (land clean-up) excavated the ditch, which was initially not deep enough. After further excavation, the ditch began to collect a combination of the chemical and water. The land contractors pumped the chemical/water mix up the hill into tanker trucks for disposal.

The land contractors excavated a pit in the tank farm area and was vacuuming the chemicals out of the pit. The materials in the tank farm area (secondary containment) are very porous, reportedly filled with old bricks and tile. The land contractors were also vacuuming the chemicals from the leaking tank, #396. The land clean-up crew had utilized vacuum trucks to empty the chemicals from all three of the MCHM storage tanks. The report from the facility to EPA was that approximately 1,200 gallons of the chemical remained in the two "sister" tanks, and that the leaking tank was empty. The vacuum operations were 24-

hour operations. WVDEP conducted oversight of these operations in shifts, also for 24-hour operations.

The RP hired a certified OSRO. WVDEP directed them to deploy hard boom in the river, which was accomplished upon arrival of the OSRO. The OSRO deployed boom along the left descending bank of the river, adjacent to the spill location. The OSRO was also attempting to use vacuum pumps to collect the materials from the river's surface. However, the chemicals were trapped beneath the ice that lined the shores of the river. As the ice was broken, the chemicals quickly dispersed into the river. The chemical appeared to be coffee-colored.

WVDEP enforcement personnel were on scene and were collecting water samples from the spill area in the river. Dupont assisted with analysis of the samples.

EPA offered support to WVDEP with air monitoring. Subsequently, EPA's START contractor (TechLaw) conducted air monitoring on Site. The TVA-1000 (FID) and Multi-Rae (PID) were used to conduct the air monitoring. At the source, the FID detected 49-50 ppm. In the area of the tanks, the FID detected 7-15 ppm. Along the fence-line, the FID detected 1-7 ppm. In the "background", which was designated along the road adjacent to the facility, the FID detected 0.5 ppm. The PID did not detect any significant concentrations of the chemical. START conducted written and photographic documentation of Site conditions.

An inventory of the facility was provided to EPA. This inventory consisted of raw glycerin, finished glycerin, calcium

chloride, lignin, MCHM, and RDC 777.

According to EPA toxicologists, the air health criteria for similar compounds are very high (none for the mixture itself), meaning not very toxic. The vapor pressure value indicates you won't find much of the chemical in the air. No information is available on odor thresholds but for one or more of the compounds in the mixture, it/they must be very low.

Throughout the day, local media was on Site. The media remained outside the facility gate and did not enter the property.

On January 11, 2014, USCG discussed boom deployment downstream at the WVAWC. WVAWC had deployed boom around their water intake, which is 15 feet below the river surface. USCG suggested a strategy to further divert the chemical around the water intake; WVDEP and EPA were in agreement. The boom was deployed at an angle starting from the LDB of the river. START documented deployment of the boom, which consisted of absorbent boom in front of hard boom.

During the morning hours, heavy rains occurred on Site. This contributed to release of the chemicals that were trapped beneath the ice that lined the river banks, as all of the ice was melted during the rain storm and increased temperatures (low-50's). Throughout the day, rains continued, until approximately 1300 hours. During a brief break in the rain showers, START conducted additional air monitoring with the FID. Along the fence-line, 1-4 ppm was detected. In the vicinity of the tanks, up to 7 ppm was detected.

EPA and START conducted a Site walk to observe operations. The contractors had placed poly liner in the trench and

extended the length of trench in the direction of the initial release. The contractors continued to vacuum the chemicals from both the trench area and from beneath the tanks. The contractors also continued to vacuum the MCHM from the leaking tank, by dusk, the facility reported that the leaking tank was empty.

The facility arranged for transport tankers to continually load the chemicals on Site. These operations were conducted throughout the day.

The WVAWC proposed a concentration of MCHM of 1 ppm or less in order to lift the Do Not Use ban on the water. ATSDR and CDC both agreed to this limit. This detection level must be maintained for a period of 24-hours.

On January 12, 2014, USCG and EPA met on scene. WVDEP was called in to the meeting. It was agreed that daily meetings should occur to update all personnel in the command structure and to set tasks for operational periods. Activities were to continue 24 hours a day, with WVDEP oversight. The RPs actions on Site to date were discussed. USCG stated that they observed a direct leak from the tank. All were in agreement that the source was the major concern and that it had to be contained. The RP was called into the meeting, along with an engineering consultant. Following discussion, all were in agreement that the following actions needed to be taken: removal of all of the materials from all three of the tanks; steam clean all three of the tanks; and remove the tanks from the containment area. The first two tasks were identified by the RP to be completed by this evening. Following these aforementioned activities, the next task will be to determine what chemicals are beneath the concrete pad in the

containment area.				
<p>The boom is still deployed in the river. The river's current has increased from the rain that occurred yesterday, lessening the effectiveness of the boom. Also, the increased river speed and level has contributed to an increased amount of debris that is being collected in the boom. The boom that is located near the water intake still has both skirted boom and absorbent boom and pads. WVDEP directed the facility to regularly change out the absorbent boom upon visual inspection of saturation.</p> <p>There is a skimmer deployed where the boom is extended across the entire width of the river. The RP's contractor reported that the sheen is not as visible today because of the speed of the river, and reported that no more than 1,000 gallons of the chemical has been recovered in the absorbents, skimmer, and by vacuum truck from the river operations.</p> <p>EPA and START conducted a Site walk to observe operations and the condition of the hillside/trench area. The surface soils were saturated and the chemical odor remained detectable.</p> <p>EPA and FEMA conducted a meeting. FEMA's concern was to lift the Do Not Use order. A Civil Support Team from Tennessee has been called in. Analysis of 40 samples per day per laboratory can be conducted. A total of 120 samples are going to laboratories today. They will continue to do testing to ensure that the water quality does not change over the next week.</p> <p>2.1.2 Response Actions to Date</p> <p>January 13, 2014</p>				

During the prior night's shift, the RP's contractor steam-cleaned all three of the MCHM tanks. The plan was to lift and relocate the tanks from the cement pad. A specific safety plan was being drafted for this activity. The RP requested that EPA assist in the review of the general Site safety plan and the contractor's safety plan. The facility had a safety officer on Site.				
Tanker trucks on Site continued to pump any areas of the Site that contain pooled water, concentrating on the sumps in the containment area. Tanker trucks were also on Site removing product from the other tanks of the facility, as ordered by WVDEP.				
WVDEP staff identified a small gas leak in the tank containment area. START conducted air monitoring and detected 40% LEL above the bubbling gas. The gas company was called and stopped the gas leak. The gas company marked the gas line on Site, which runs beneath the containment area. An additional gas line was located at the far northeastern area of the facility, which runs down the slope towards the river. No tank cutting activities were conducted today due to this gas leak.				
Discussions to install a French drain were still on-going. The purpose of installation of the French drain was to assist in water collection and pumping out of the water/product mixture from the soil near the leaking tank. The facility collected soil samples from this water and shipped them to a laboratory in California for analysis.				
WVDEP continued to collect water samples twice a day at two locations. One location was 2.1 miles upstream from the				

<p>facility in the Elk River. The second location was 10 miles downstream from the facility in the Kanawha River. Results are not currently available. WVDEP has also collected soil samples around the facility.</p> <p>The first zone of the water distribution system began flushing today.</p> <p>January 14, 2014</p> <p>Overnight operations included continual pumping of the storm water that was collected in the trench's containment pool and transference of the liquids to a vacuum truck. The morning goal was to preserve the integrity of the breached tank; therefore, no operations were conducted in the tank farm area. However, the land contractor continually pumped water from the containment area into trucks.</p> <p>During the morning briefing, personnel from the facility, USCG, WVDEP, CSB, EPA, START (TechLaw), and the Attorney General's office were present. It was reported that the land contractor found a hole, approximately the size of a quarter, in the bottom of the tank that breached. The hole appeared to have been punched from the bottom, as it was v-shaped "upward". As the rains have caused a very muddy scene, the facility's contractor set up a tent and ensured a safe pathway to the tank for the interested parties to view the hole in the tank. Operations to cut and remove the tank from the facility were delayed to preserve the evidence so that CSB could conduct their investigation.</p>				
---	--	--	--	--

The facility's accounting department was working with past inventory and the volume of chemical that has been transported off Site in order to more accurately estimate the size of the release.

As the volume of water that was coming out of the area of the storm water pipe was increasing, it was speculated that water was originating from an additional source. No odor was present, nor was sheen observed. WVDEP conducted a field test and detected chlorine in the water. The water department was called in and detected fluorine in the water. The water department shut off a valve on location and the water flow diminished in the storm water drain area. Therefore, discussions were held concerning diverting this water directly into the river. Testing of this water will be conducted prior to this, and an engineering plan will be used to construct the "directional ditch"; WVDEP, USCG, and EPA will need to approve the plan and determine a location in the river where the water will be discharged.

The facility is continuing a river sampling program. Samples are being flown to California for analysis. A control sample was provided to the laboratory. Analytical results are expected this evening.

There were no reports of any fish kill or significant issues with aquatic life in the Elk River.

WVDEP ordered the land contractor to extend the liner in the trench area at the

base of the facility, located adjacent to the river.

WVDEP and USCG agreed to remove the hard boom that extends across the entire river, and the boom located outside the water intake at the WVAWC. However, the facility was directed to leave hard boom with interior absorbent boom along the shoreline adjacent to the facility; WVDEP and USCG were determining the placement and length of that boom.

Six zones have been reported to have flushed their water.

January 15, 2014

Following the repair of the waterline, the amount of water that was discharging in the area of the storm water pipe did not diminish. However, as a result of the water line repair, a large amount of water was discharged across the road and onto the front of the facility's property. This water pooled along the front of the containment wall and migrated towards the storm drain. Previously, the RP's land contractor had attempted to seal the storm drain, and succeeded in doing so. However, the water was infiltrating the void around the pipe and flowing beneath the facility, emerging on the rear side of the property. In addition, due to all of the voids in the clay layer present beneath the secondary containment, the water had also migrated through the voids and filled the sumps located in the floor of the concrete pad beneath the tanks. Consequently, the RP's contractor spent most of the afternoon pumping water from the interior of the containment area.

OSRO deployed horizontal absorbent booms inside the hard skimmer boom with interior absorbent boom that extends from the property line down to the dock area. A total of seven interior horizontal booms were deployed. The boom strategy encompassed the entire sloped area of the Site, which was the area of concern for migration of the MCHM into the river. USCG, WVDEP, and EPA agreed with the current boom strategy. The boom was still being maintained and the absorbent booms were replaced as needed.				
Two roll-offs trucks were delivered to the Site for containment of potentially contaminated soils, to be excavated during installation of the French Drain. As pumping water from the containment area was priority, installation of this drain was delayed; no work was conducted on this today.				
WVDEP conducted exploratory digging along the hillside in the northeastern portion of the facility, just outside the containment area where the glycerin tanks are located. The odor of the product was prevalent. The RP's contractor placed absorbent boom along the wall and covered the area with a tarp, to prevent rain water from washing the product down the slope and into the river.				
Installation of fence along the base of the slope behind the facility began. Fence installation includes exterior orange hi-vis fence and interior silt fence. The fencing will extend along all areas of the Site that				

have disturbed soils.				
The Do Not Use order was lifted for approximately 80% of the zones. Downtown Charleston and all areas west of the city had water use. Some of the schools in the outlying areas remained closed.				
CST collected two samples from the water emerging from the storm drain area. The fluorine was low, 0.14 ppm, and MCHM was detected at 0.3-0.4 ppm.				
Exploratory geoprobe operations began in the containment area, in the vicinity of the breached MCHM tank. Holes were punched through the concrete in order to determine a good location for a recovery well.				
Excavation of a trench at the far northeastern portion of the Site was delayed due to the potential instability of the glycerin tanks that are staged above the slope. The capacity of each of the tanks is 400,000 gallons. Due to the weight of the glycerin and the tanks themselves, it would have been dangerous to disturb the slope below them. In addition, three years ago, one of the tanks was unstable and the footer had to be repaired. The adjacent tank was slightly buckled as a result. Therefore, the RP's contractor pumped out as much as possible from the tanks; four feet of product remain in the tanks, which is equivalent to approximately 48,000				

gallons (one inch is approximately 1,000 gallons). This activity was conducted to lessen the weight of the tanks prior to disturbance of any soils downgradient from the area. Discussions are still ongoing concerning the trench work in that area of the Site.

January 16, 2014

A plan for the installation of the french drain was approved by WVDEP and EPA. The RP's contractor conducted a Site walk with USCG, WVDEP, EPA, and START (TechLaw) to allow everyone to visualize what was going to be done. The french drain will begin at the southwestern end of the property and will extend up to the current location of the interceptor trench. To avoid disrupting the stability of the hillside, the drain will be placed at a depth of less than three feet bgs. Two ports, one on each end, will contain a vacuum hose to remove liquids from the pipe.

The Do Not Use order was lifted for over 80% of the zones. Downtown Charleston and all areas west of the city have water use. Some of the schools in the outlying areas remain closed.

Last evening, CST collected two samples from the water emerging from the storm drain area. The fluorine was low, 0.14 ppm, and MCHM was detected at 0.3-0.4 ppm. CST collected an additional two samples this morning; the first sample was non-detect for MCHM, and results from the second sample are expected later today. This contamination is possibly from un-cleaned equipment.

<p>The RP received sample results from the storm drain area; there were high concentrations of MCHM. The RP will not divert that water into the river. All water on Site will be funneled to the interceptor trench and vacuumed to the tanker trucks.</p>				
<p>Exploratory geoprobe operations began in the containment area, in the vicinity of the breached MCHM tank. Holes were punched through the concrete in order to determine a good location for a recovery well. Petroleum products were detected in these test holes, which were 10 feet bgs. Freedom Industries' lawyers have been in contact with Pennzoil concerning the issue. WVDEP is also aware of this legacy connection to previous facility operations.</p>				
<p>WVDEP conducted exploratory digging along the hillside in the northeastern portion of the facility, just outside the containment area where the glycerin tanks are located. The odor of the product was prevalent. The RP's contractor had placed absorbent boom along the wall and covered the area with a tarp, to prevent rain water from washing the product down the slope and into the river. A contractor removed trees from that area. The RP's contractor then excavated a trench from just beneath the containment wall in a downgradient direction towards the existing interceptor trench. The contractor excavated approximately 10 feet away from the gas line. Bentonite was placed along the base of the trench</p>				

and covered with a poly liner.				
Installation of fencing was completed along the crest of the river bank. The fencing extended from the southwestern end of the facility in a northeastern direction, along the river, to the base of the initial spill area. The fencing consists of outer orange hi-vis fence, with interior silt fence (on the facility side). The fencing was installed in areas of the Site where surface soils were disturbed.				
In the experimental phase, an oil/water separator was being used in an attempt to remove the MCHM from the water that is being vacuumed from the interceptor trench and dike area. In the initial phases, it appeared to be successful in separating the product from the water. The RP's contractor collected samples from the influent and effluent of the separator to confirm that it is working. Also in the experimental phase, the RP's contractor was requesting a permit from WVDEP's air division in order to use an air stripper that extracts volatiles, followed by two carbon vessels, to treat the product and release it into the air.				
Per EPA RA request, OSC Matlock attended a meeting at the US Attorney's Office (Booth Goodwin II) to meet with all invited agencies to discuss roles and responsibilities during this emergency. The main focus of the meeting was to ensure investigative agencies were coordinating with each other. The WVDEP and EPA updated the operational status on source control at the facility.				

The US Attorney was very pleased with the meeting and agency updates provided by the various agencies.

January 17, 2014

Temperatures dropped below 30 degrees Fahrenheit overnight and there was a minor amount of snowfall. Surface water along the slope behind the tanks was frozen and very little water was observed emerging from the storm drain area. River flow has significantly decreased, and is almost back to normal.

The results from CST's sample collection of the water from the pooled areas along the roadside were received. The samples were non-detect for MCHM. WVDEP was looking into whether the water could be discharged directly into the sewer system or if it should be treated.

A minor permit modification was granted by WVDEP to Freedom Industries allowing disposal of solid waste at the City of Charleston's Landfill. The MCHM solid waste was deemed non-hazardous according to RCRA. Approval was granted for disposal of 2,000 tons per year.

It was reported that a total of 19 baker tanks were full of the MCHM-contaminated water, and are stored at the Poca facility. The RP's contractor was collecting samples from the tanks. Any Baker tanks that were single-walled were being replaced with those that are double-

walled. Additional security measures were being taken in this staging area, including installation of wireless cameras. These cameras were also going to be installed in the tank storage area at Freedom Industries in Charleston, WV, in order to conduct 24-hour monitoring of the tanks to ensure that no additional leaks were occurring.

The poly liner in the interceptor trench was peeled back to facilitate extension of the trench; the trench was extended in a northeastern direction, towards the rear of the 400,000-gallon glycerin tanks. The trench then continued in an easterly direction, up the slope, towards the base of the containment wall. The trench was diverted around an existing gas line. The contractors covered the trench with poly liner and extended it into the existing interceptor trench area. All of the poly liner was connected to divert all of the runoff water from the containment areas and storm drain into a single interceptor trench.

The monitoring wells were developed on Site by the RP's subcontractor. There were four monitoring wells in the base of the slope, located adjacent to the riverbank; these are 20 feet bgs. There were three monitoring wells located in front of the containment area, adjacent to the road; these are 40 feet bgs.

The river level has significantly dropped, and the OSRO continued to maintain the boom deployed in the river. The boom was reported to have no MCHM odor and

no product was observed on the absorbent booms.				
Containments were constructed beneath the roll-off boxes on Site. These roll-offs were to be used to stage the MCHM-contaminated soils that will be removed from the slope behind the tanks.				
The Chemical Safety Board departed the Site, but is continuing their investigation. They will return to the Site on Tuesday, January 21, 2014.				
The Do Not Use order was lifted for over 90% of the zones.				
January 18, 2014				
Due to extremely wet soils on Site, overnight operations were limited to monitoring the interceptor trench and pumping water from the trench into tanker trucks. As temperatures significantly dropped overnight, the volume of water that emerged from the storm drain continued to be reduced. Water pumping operations continued throughout the day, wherever it was necessary.				
WVDEP reported that MCHM was detected at 285 ppm in the water sample collected from the "seep" area at the northeastern end of the facility. The RP and its contractor observed fluids in that area and stated that the film is contiguous and consistent, with a rainbow color; they believe that there are petroleum hydrocarbons present. Regardless, the				

fluids still contain MCHM and there will be additional trenching to collect these fluids. However, because the Site soils are near frozen at the surface, all trenching operations are on delay until the soils thaw. WVDEP plans to collect samples and analyze them for BTEX, DRO, GRO, and TPH. OSRO was directed to extend the boom 20 feet upstream in the river to ensure that the seeped material is captured.

EPA and START (TechLaw) visited the Poca facility to investigate staging operations of the MCHM-contaminated water. By observation and speaking to the crew on location, four tanks were full with MCHM product, three tanks were full with MCHM-contaminated water, and one tank was full of product mixed with dirty water.

Stone was brought to Site for construction of an access road to the sump area. The lower bench was lined with geo-tech fabric and covered with stone.

Inspectors from the Attorney General's Office were on Site to meet with EPA to discuss an investigation into the water lines in the tank area.

The Do Not Use order was lifted in all of the zones.

START (TechLaw) updated the site feature map to depict boom deployment areas, trench areas, monitoring well locations, and hydro-punch locations. The map was provided to FEMA.

FEMA representatives were on site to

meet with the EPA OSC. The EPA OSC gave an update of site operations.

January 19, 2014

As a precaution, OSRO extended the boom approximately 20 feet upstream in the river. Under WVDEP order, the facility's contractor hand-dug an extension to the existing trench to the end of the tank farm, to contain the drainage from the additional "seep" that was located along the northeastern bank of the facility.

The facility conducted exploratory excavation in an attempt to identify the source of the water that is collecting beneath the tank farm. A compromised corrugated drainage pipe was located just inside the containment area, in the vicinity of the MCHM tanks. In the same area, three additional smaller-sized pipes were discovered, which may be water/foam suppression lines used by the former owners of the facility. Just outside the containment area, water continues to collect at the base of the containment wall. The contractors are continually pumping water from inside and outside of the containment wall, at a rate of approximately 5,000 gallons every 10 hours. WVDEP was provided water samples from the area inside the containment. The source of this water is currently unknown.

The facility has hired an environmental consulting firm to develop a remediation plan for the site, per the WVDEP order.

Additional security measures for both the Poca staging facility and the tank farm at Freedom Industries are scheduled for January 20, 2014. Wireless cameras will be used to monitor activity at both

locations. The security should enable immediate response if additional discharge or compromise of the tanks on site occurs.

A vacuum truck was used just behind the northeastern area of the containment, where visible fluids were observed on the surface soils. The vacuum removed the top few inches of soil and surface water.

January 20, 2014

The focus of Site operations continued to be controlling the on-Site water and collecting contaminated water/product from the ditches and the collection trench. WVDEP, EPA, and the facility contractor walked the site to find a location where to pipe the runoff water that is flowing to the Site. It was determined that a sump would be dug along the road in an attempt to collect the runoff water before the water reaches the property. The collected water would either be diverted or collected in tanker trucks to send to a waste-water treatment plant. The RP's contractor began excavation of the trench. Water was discovered at approximately three feet bgs, but was not in large volume.

The facility continued to maintain the boom and is reporting no odor or sheen on the absorbent booms.

The facility is receiving more double-walled tanks at the Poca facility to contain water from the Site. The facility will profile the water for disposal by collecting samples from the storage tanks.

Tanker trucks continue to load glycerin from the 400,000-gallon tanks for transport off Site, by order of WVDEP.

<p>The tanker utilized for heavy duty vacuum operations of surface water and soils was pulled into the loading dock area and a poly containment was constructed for sediment collection. The tank was slightly opened to decant the fluids from the truck, which washed into the drain that led to the oil/water separator. The soils from the truck were then placed into lined roll-off boxes.</p>					
<p>The geoprobe was decontaminated in the loading dock area. The wash water was directed into the drain that leads to the oil/water separator.</p>					
<p>Vacuum hoses continue to be manned 24-hours to remove the water from the sumps both outside and inside the containment area.</p>					
<p>2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)</p>					
<p>The Responsible Party is identified as Freedom Industries, and is under orders from WVDEP. There are two orders, one is cease and desist, and the other is development of a plan to empty all 14 tanks on Site.</p>					
<p>2.1.4 Progress Metrics</p>					
<p><i>Was St re a m</i></p>					
<p>2.2 Planning Section</p>					
<p>2.2.1 Anticipated Activities</p>					
<p>2.2.1.1 Planned Response Activities</p>					

EPA, EPA's contractors, and the USCG will support WVDEP's oversight of removal activities. The priority at this time is to contain the source and prevent further discharge of contaminants to the river. To achieve this, a French drain will be installed at the top of the slope in the southeastern area of the Site, which will tie into the interceptor trench area. Future activities will include an assessment of an extent of contamination on Site. EPA will provide support to WVDEP with sampling activities, and other technical support, upon request.				
---	--	--	--	--

2.2.1.2 Next Steps				
---------------------------	--	--	--	--

- | | | | | |
|---|--|--|--|--|
| <ul style="list-style-type: none"> • Divert the runoff water that is entering the containment area; • Complete installation of the French drain at the top of the slope; • Utilize a vacuum truck to remove the top one to two inches of soil from the suspected MCHM-contaminated sloped areas on Site. | | | | |
|---|--|--|--|--|

2.2.2 Issues				
---------------------	--	--	--	--

- | | | | | |
|---|--|--|--|--|
| <ul style="list-style-type: none"> • There is the possibility of an unknown amount of MCHM and potentially other chemical liquids may exist beneath the tank; • There is an unknown amount of MCHM that has seeped into the soils/materials located along the river bank; • It is uncertain if the chemicals are still leaking into the Elk River from locations along the river bank, adjacent to the facility. | | | | |
|---|--|--|--|--|

2.3 Logistics Section				
------------------------------	--	--	--	--

No information available at this time.

2.4 Finance Section

Estimated Costs	Budgeted	Total To Date	Remaining	% Remaining
-----------------	----------	---------------	-----------	-------------

Extramural Costs

TAT/START	\$10,864.00	\$36,593.03	\$64,270.97	63.72%
-----------	-------------	-------------	-------------	--------

Intramural Costs

Total Site Costs	\$10,864.00	\$36,593.03	\$64,270.97	63.72%
------------------	-------------	-------------	-------------	--------

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

EPA OSC on Site

2.5.2 Liaison Officer

EPA Mark Ferrell

2.5.3 Information Officer

3. Participating Entities

3.1 Unified Command/Facility (Freedom Industries)

WVDEP
USEPA
USCG
Freedom Industries

3.2 Cooperating Agencies

WVDHHR
National Guard
WVDNR
ORSANCO
WVAWC
CSB
Attorney General's Office

4. Personnel On Site

WVDEP
USCG
USEPA
START (TechLaw)
FEMA
Freedom Industries
Clean Harbors
Diversified Services LLC
Conestoga Rovers and Associates
CSB
Attorney General's Office

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.